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A TAXONOMIC REVISION OF INDIAN *PANAX* LINN. (ARALIACEAE)

R. N. Banerjee
Botanical Survey of India, Howrah

ABSTRACT

The genus *Panax* Linn. growing wild in India including Nepal, Bhutan and Sikkim is the subject of this Revision. Hitherto 2 species and 1 variety have been described in Indian Floras. The author has discovered 2 more species viz. *P. sikkimensis* Ban. and *P. assamicus* Ban. which he named and described with Latin diagnosis in the present paper.

INTRODUCTION

The genus *Panax* was established by Linnaeus (1753) and described under *Pentadria Digynia.* He mentioned 3 species, of which *P. quinquefolius* was made the lectotype by Graham (1966) of the other two, *P. trifoliatus* was transferred to *Acanthopanax* Miq. and the last one, *P. fruticosus,* was the type of *Nothopanax* Miq. Jussieu (1789) placed it under Araliaceae for the first time. Wallich (1829, 1832) described *P. pseudoginseng* giving its characters "tuber fascicled, leaves rough with copious, gray, subulate, bristly hairs, margins deeply indented with sharp, cuspidate, double serratures, lanceolate, long acuminate, base acute, pedicels united, flowers bisexual". Walpers (1846), de Candolle (1830), and Miquel (1836), accepted Jussieu's view; but Seemann kept the group under his Natural Order Hederaceae, and divided the members into two natural groups: (1) Aralieae, (2) Panaceae; he treated the genus *Panax* under the second group. Decaisne and Planchon (1854) shifted *P. quinquefolius* and *P. trifoliatus* to *Aralia.* Bentham and Hooker (1867) supported them, but excluded *Polyscias* and *Pseudopanax.* C. B. Clarke (1879) kept *Panax* under the section Panaceae with the characters "Petals valvate, albumen uniform". He described only one cultivated species, *P. fruticosus* L. a plant growing in warmer parts of India. *P. pseudoginseng* Wall. growing wild in Nepal, Sikkim and Bhutan was described by him as *Aralia pseudoginseng* Benth. with these characters: "herbs, leaves digitate, styles 2, rarely 3". Harms (1897) showed the close relationship with *Aralia* Linn. and noted 6 species from China, Japan, North America and India. Burkill (1902) reduced *P. pseudoginseng* Wall. to a variety of *Aralia quinquefolia* Decne. et Planch. and described another new variety, *A. quinquefolia* var. *angustifolia.* Li (1942) treated the first variety as synonymous with *P. pseudoginseng*; the present author is of opinion that the second variety is untenable and is identified with *P. pseudoginseng* Wall. Li (1942) reduced *A. bipinnatifida* Clarke (*Panax bipinnatifida* Seem.) to varietal rank, *P. pseudoginseng* Wall. var. *bipinnatifida* Li. But Grushvitzky (1961) kept up Seemann's species. I think that the one character "foliolis bipinnatifidis" (Seemann 1868) is not enough for support the specific rank. So hitherto 2 species and 1 variety have been known from India; the present study has led to the discovery of 2 more species from Eastern Himalayas, which are named and described here with latin diagnosis.

This genus is closely allied to *Acanthopanax* Miq. in having valvate petals, ovary 2-celled (Clarke 1879); and to *Aralia* Linn. in being perennial herbs or shrubs with decompound leaves (Graham 1966), but distinguished in having leaves palmately compound, whorled at the summit of the stem, inflorescence a solitary umbel, fruit red or yellow (Graham 1966); distinguished also by the nature of the rhizome and the character of pedicels and styles.

According to Seemann (1868), the character of the leaves has great taxonomic significance in this family. De Candolle (1830) is of opinion that the habit and nature of leaves specify the rank. Wallich (1832) ascribes taxonomic importance more to the nature of tubers, habit of the plant, nature of leaves and the nature of inflorescence. The present author thinks that the nature of leaves, and nature of styles are also important points of taxonomic importance.

The genus is found to grow wild on the Central and Eastern Himalayan ranges from Nepal to Bhutan and Tibet. It is also found on high mountains of Travancore and Tinnevelly district. Outside India it is represented in Eastern and Central

Asia, especially Manchuria, Korea, Japan, all over China, Malaya and Polynesia and also in North America.

N.B.: Abbreviation "ISIM" is used for Industrial Section, Indian Museum, Calcutta.

Panax Linn. Sp. Pl. 1058. 1753; Gen. Pl. 481. 1754, proparte; ed. 6. 554. 1764; Jussieu, Gen. Pl. 218. 1789, proparte; DC. Prodr. 4: 252. 1830; Walp. Rep. 5: 925. 1846; Decne. et Planch. in Rev. Hortic. 105. 1854; Miquel in Ann. Mus. Bot. Lugd.-Bat. 1: 14; 1863; Maxim. Diagn. Plant. Nov. 1: 264. 1866; Benth et Hook. f. Gen. Pl. 1: 938. 1867; Seem. in Journ. Bot. 6: 62. 1868; Graham in Journ. Arnold Arbor. 47: 132-136. 1966. Lectotype: *P. quinquefolius* Linn. Sp. Pl. ed. 1513. 1763 (Graham 1966). *Ceirodendron* Nutt. ex Seem. in Journ. Bot. 5: 236. 1867. Ginseng Adams. Fam. 2: 102. 1753. *Maralia* Thou. Gen. Nov. Madag. 13. 1806. *Oligoscias* Seem. in Journ. Bot. 3: 179. 1865. *Panacea* Mitch. in Act. Phys. Med. Acad. Nat. Cur. 8: 1748 App. 221. *Raukana* Seem. in Journ. Bot. 4: 352. 1866. *Sciadopanax* Seem. l.c. 73 t. 27. 1865. *Panaxus* St. Lag. in Ann. Soc. Bot. Lyon 7: 109. 1880.

Perennial herbs and shrubs of moist rich woods. Rhizome short or elongated, branched, fascicled, or simple, tuberous; base of stem clasped by membranaceous, deciduous or persistent scales. Stem unbranched, erect, glabrous. Leaves 1-5, generally 3 in a single whorl at the summit of stem, digitately compound, membranaceous, exstipulate; leaflets 3-7, mostly 5, petiolate or sessile, glabrous or with sparse to dense setae along the veins on the dorsal surface, elliptic to obovate, sometimes linear, the base acute to rounded, the apex acute to long acuminate, the margin serrated, uni- or biserrate. Inflorescence a single short or long peduncled, terminal umbel of many flowers, the pedicles subtended by lanceolate bracts, sometimes more than one flowers on single pedicels. Flowers bisexual or unisexual or polygamodioecious. Floral tube obconical or cylindrical, articulated in flowers. Sepals 5 cupshaped or united at the base, 5 toothed, green. Petals 5, triangular or ovate or linearly oblong. Stamens 5, filament fleshy; anthers oblong or ovate to elliptic, bilobed, lobes sometimes angular possibly it marks the longitudinal dehiscence. Ovary 5 celled, styles 2-3 united at the base, or free, reflexed, persistent, inserted at the middle of the concave or convex smooth or corrugated disk. Fruit flat or globose, ribbed.

KEY TO THE SPECIES

A_1 Styles free, leaflets uniformly serrated with short teeth, rough, fruit globose
B_1 Leaflets oblong-lanceolate, midrib inconspicuous from dorsal surface, apex of the petals cuneate, disc convex, bracteoles absent ... *P. sikkimensis*
B_2 Leaflets broadly linear, midrib distinct from both surfaces, apex of the petals inflexed apiculate, disc flat, bracteoles linear-lanceolate ... *P. assamicus*
A_2 Styles united at the base, leaflets deeply serrated with sharp cuspidate double serratures, tubers fascicled, branched, smooth, fruit laterally compressed
B_1 Leaflets broadly lanceolate, styles straight ... *P. pseudoginseng*
C_1 Leaflets entire .... var. *pseudoginseng*
C_2 Leaflets bipinnatified, lobes serrated ... var. *bipinnatifida*
B_2 Leaflets linearly lanceolate, bristly serrated, styles recurved ... *P. fruticosus*

Panax sikkimensis Ban. spec. nov.

Proxime affinis *Panaci pseudoginseng* Wall., a quo tamen differt rhizomate unico vel integro, squamis persistentibus ad basin caulis in annulum dispositis, foliolis oblongo-lanceolatis, ad basin rotundatis vel subcordatis, antheris globosis vel ellipticis, disco convexo.

Small herb of 74 cm tall. Rhizome single, horizontal having ringlike persistent scales, sometimes knotted. Stem dark-brown in colour, weak, soft, terete, glabrous. Leaves whorled at the summit of stem, exstipulate, digitately 5-7-foliate, 5-17 cm long, petiolate; petioles glabrous, weak, terete, 2-7.5 cm long; leaflets membranaceous, dorsal surface setose on veins and midribs, ventral surface sparingly setose, petiolulate, oblong-lanceolate, 3-10 cm long, 0.7-2.5 cm wide, long acuminate, acumination upto 2 cm long, base rounded or subcordate, smooth, serrations setose, uniseriate, venetion unicostate reticulate, lateral nerves ± 8 on each side of the midrib viewed from the ventral surface, midrib regular, tertiary nerves obscure from dorsal surface; petiolules 0.5-1.7 cm long, lateral ones shorter than the rest, terete, glabrous. Inflorescence terminal, 4-20.5 long glabrous, composed of solitary peduncle bearing an umbel at the top or of a whorl of peduncles above the middle of rachis, ebracteate; peduncles 8.18 cm long, glabrous; umbels many flowered, ± 2 cm in diameter, pedicels glabrous or puberulous, 1-2 cm long, arteculated at the top. Flowers bisexual, small, 1-2 mm long in bud. Calyx green, cupulate, sepals 5, ovate, ± 1 mm long alternate to petals, opposite to stamens. Corolla polypetalous, petals 5, glabrous on both surfaces, 1-1.5 mm long, less than 1 mm wide, triangular in outline, cuneate. Stamens 5, alternate to petals, filament fleshy, nearly as long as anthers; anthers yellow, elliptic to globose, ± 1 mm long, bilobed, dorsifixed; ovary 2-celled, styles ± 0.5 mm long, 2-3 in number, united at the base, recurved, stigmas 2-3, truncated, free. Disc convex around which stamens are inserted. Fruits dry drupe, 5 lobed, 3-4 mm in diameter (Fig. 1).

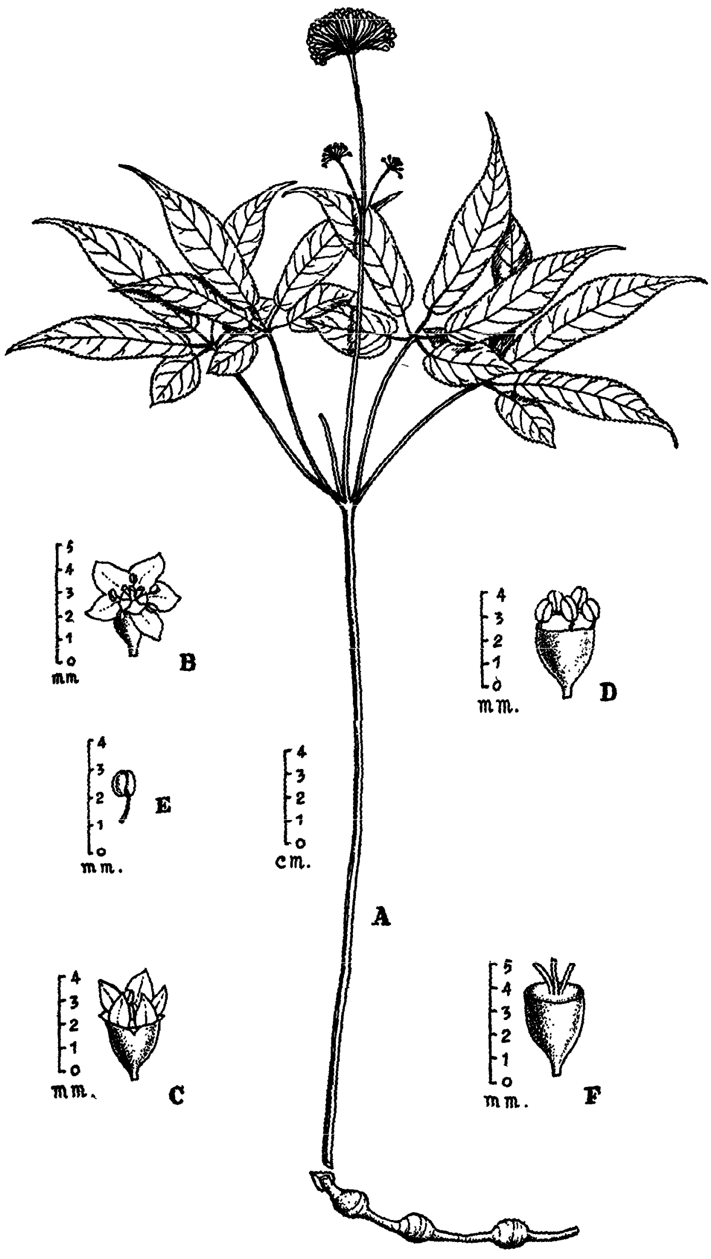

Fig. 1: *Panax sikkimensis* Ban. spec. nov.
A. A Plant. B. A flower (Top view). C. A flower showing sepals. D. Sepals and petals removed showing stamens and convex disc. E. A stamen. F. Flower dissected showing styles.

Specimens examined: Zemu valley, 2745 m, Sikkim Himalaya, 25.7.1909, *Smith & Cave* 2781 (CAL) *holotype:* Lachung, 2593 m, Tibet, May 1885, *King's Coll.* s.n. (CAL); Sikkim, 2135-3355 m, *J. D. H.* s.n. Acc. no. 191764 (CAL); Sikkim Himalaya, *G. A. Gammie* s.n. Acc. no. 191755 (CAL); Gomchu, 2226 m, in between rocks in cool shady places on upper bank of stream, rare, 5.9.1965, *A. S. Rao* 43445 (ASSAM).

The species is closely allied to *Panax pseudoginseng* Wall. but it is easily distinguished by having tuber single, having persistent scales at the base of the stem in a ring, leaflets oblong-lanceolate, base rounded or subcordate, anthers globose to elliptic, disc convex. Unlike *P. sikkimensis, P. pseudoginseng* possesses rhizomes fascicled, leaflets lanceolate, double serriate base acute or obtuse, anthers oblong, disc flat.

Panax assamicus Ban. spec. nov.

Affinis *Panaci pseudoginseng* Wall., a quo tamen differt habitu multo altiore, foliolis linearibus, setosis ad basin, minutim uniformiter serratis, petalis inflexo-apiculatis, staminibus multo longioribus, stylis penitus liberis.

Tall, stout herb of 1.5 m tall. Tuber aromatic horizontal, unbranched. Stem straw coloured, stout, erect, glabrous, bark hard. Leaves whorled at the summit of the stem, exstipulate, digitately 5-7 foliate, 14-36 cm long, petiolate; petioles glabrous, stout, angular, 9-18.5 cm long; leaflets sessile rarely petiolulate, membranaceous, both surfaces setose on veins and midribs, long broadly linear, 7-18 cm long, 1.5-3 cm wide, long acuminate; acumination upto 3 cm long, base rounded, rarely attenuate, densely setose, minutely uniformly serrate, unicostate reticulate; lateral nerves subconspicuous, more than 20 on each side of the prominent broad midrib viewed from ventral surface; midrib regular, rarely oblique; tertiary nerves obscure from dorsal surface; petiolules 3-16 mm long, lateral ones shorter than the rest, soft, compressed. Inflorescence a terminal umbel, glabrous, 16.5-40 cm long, pedunculate; peduncles ± 36 cm long, glabrous, stout, sometimes whorled at the top of the rachis; umbels many flowered, 2-4 cm in diameter; bracteoles linear, persistent, glabrous, pedicels pubescent, 1.2 cm long, articulated at the top. Flowers greenish-white in bud, bisexual, 1.2 cm long. Calyx green, cuplike obscurely toothed, teethless than 1 mm long, alternate to petals. Corolla polypetalous, calyptrate in bud; petals 5, glabrous on both surfaces, 2 mm long, oblong, one-nerved, inflexed-apiculate. Stamens 5, alternate with petals, filaments filiform, 2 mm long; anthers oblong, 2 mm long, bilobed, dorsifixed; ovary inferior. Disk flat, styles 2-4 free; stigmas 2-4, rounded. Fruit red, globose, up to 5-lobed, 5 mm in diameter (Fig. 2).

Specimens examined: EASTERN HIMALAYA: The Holotype, *J.D.H.* et *T T.* s.n., was collected from Khasia mountains and has been preserved in the Central National Herbarium (CAL) under Acc. no. 191778; Dunpep, 1891 m, Khasia mountains, 30.5.1911, *J. H. Burkill & S. N. Banerjee* 34257 (CAL); Mauphlang, 1830 m, Khasia, 16.6.1885, *C. B. Clarke* 38303 (CAL); Mauphlang, Khasia hills, May 1920, *H. G. Carter* 1611 (CAL); Shillong peak, 1952 m, 23.7.1913, *U. N. Kanjilal* 2344 (CAL); Soyung, 1368 m, Khasia, 30.8.1885, *C. B. Clarke* 40298 (CAL); Shillong, 1520 m, Aug. 1890, *H. Collett* 16 (CAL); Khasia hills, July 1850, Acc. no. 191776 (CAL); Khasia hills, 1520-1830 m, *S. Kurz* 385 (CAL); Sonada, Sikkim, 1982 m, *S. Kurz* s.n. Acc. no. 191763 (CAL); above Rungbee, 10.5.1876, *Dungboo* s.n. Acc. no. 191760 (CAL); Samdong, Sikkim, 1901, *Prain's Collector* 223 (CAL); Wahlyer, Nongstoin area, Khasia & Jaintia District, 14.6.1958, *G. Panigrahi* 16113 (CAL); Shillong Peak, 1860 m, 5.6.1958, *R. S. Rao* 11177 (CAL); Shillong Peak, Khasia & Jaintia hills District, 17.6.1956, *R. S. Rao* 2743 (CAL); Shirohee, Manipur—Naga hills, 2135 m, 10.7.1948, *S. K. Mukerjee* 3183 (CAL); Sandakphu to Rimbick, 9.10.1941, *K. Biswas* 5661 (CAL); Lawlyngoloh, Assam, 28.6.1938, *S. R. Sharma* 16683 (ASSAM); Myllieum, Assam, 31.8.1930, *P. C. Kanjilal* 8389 (ASSAM); Upper Shillong, 1850 m, mostly in shade, 27.7.1930, *P. C. Kanjilal* 8283 (ASSAM).

This species is allied to *Panax pseudoginseng* Wall. differing in taller habits; leaflets linear, setose at the base, minutely uniformly serrate inflexed-apiculate nature of petals; stamens much longer; styles completely free.

Panax pseudoginseng Wall. in Trans. Med. Phys. Soc. Cal. 4 : 117. 1829; Pl. As. Rar. 2 : 30. t. 137. 1831; Pharm. Centralbl. 3.23 : 353. 1832; Meyer in Repert. Pharm. U. Pr. Chen. 7 : 525. 1842; Bull. Phys. Math. Acad. St. Peterb. 2 ser. 1 : 340. 1843; Steud. Nom. Bot. ed. 2 : 249. 1840-41. Walp. Rep. 5 : 924. 1846; Seem. in Journ. Bot.

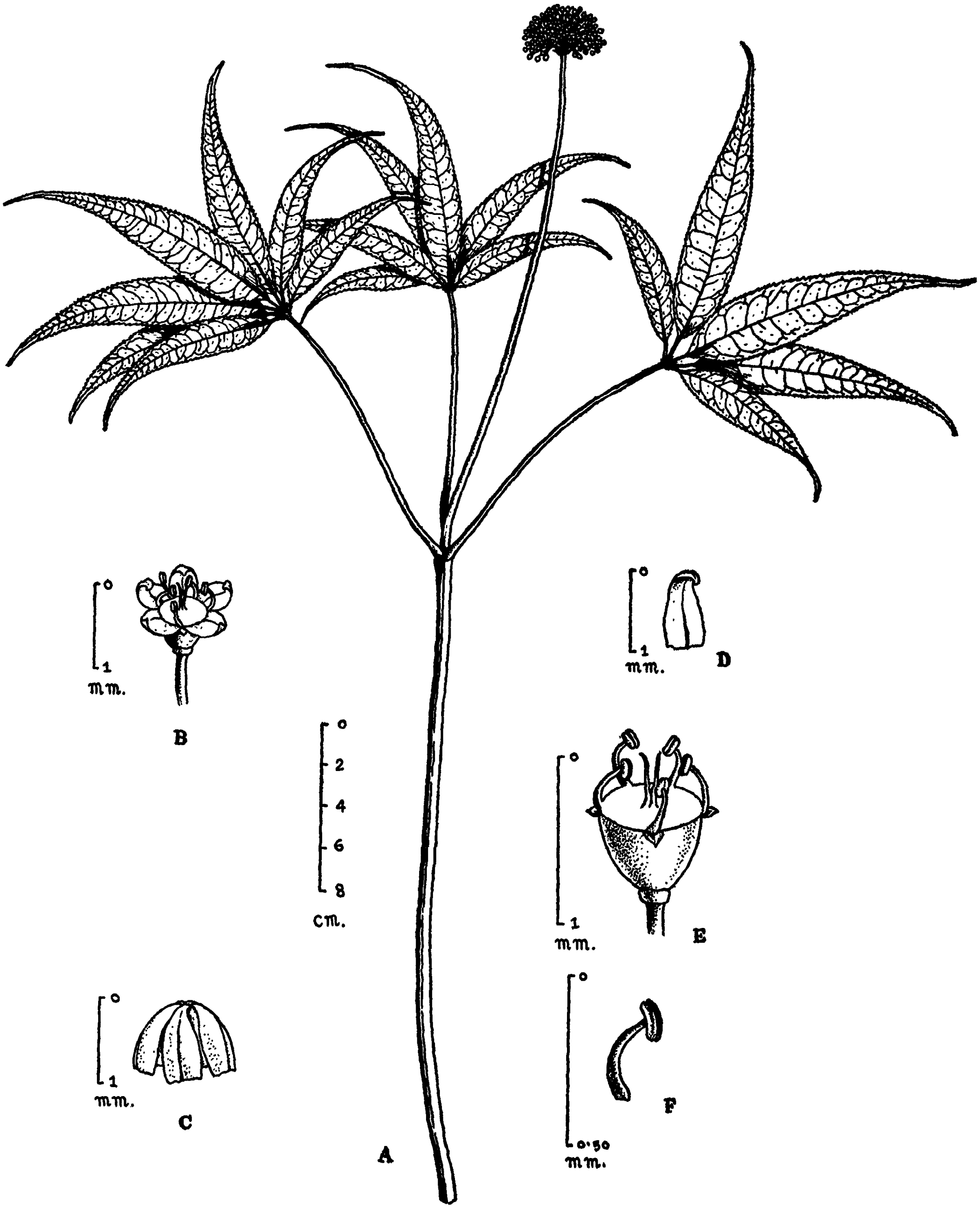

Fig. 2 : *Panax assamicus* Ban. spec. nov.
A. A plant. B. A flower. C. Corolla removed showing Calyptrate condition. D. A petal. E. Sepals and Petals removed showing stamens and styles. F. A stamen.

6: 54. 1868, Rev. Heder. 99. 1868 : Harms in Nat. Pflanzenfam. 3(8): 59. 1894; Merr. in Journ. Arnold Arbor. 23 : 187. 1942 ; Li in Sargentia 2 : 117. 1942 ; Grushvitzky, Ginsengs 1961. *Panax shin-seng* Nees var. *nepalense* Nees V. Eseb. Icon. medic. suppl. 1 : 70. 1933, *Aralia pseudoginseng* Benth. ex Clarke in Fl. Brit. Ind. 2: 721. 1879 ; *A. quinquefolia* (L.) Decne. et Planch. var. *pseudoginseng* Burkill in Kew Bull. 1902: 7. 1902 ; *A. quinquefolia* (L.) Decne. et Planch. var. *noto-*

ginseng Burkill, l.c.; *A. quinquefolia* (L.) Decne. et Planch. var. *elantior* Burkill, op. cit. 8; *A. quinquefolia* (L.) Decne. et Planch. var. *angustifolia* Burkill, op. cit., 7 syn. nov.; *P. schin-seng* seusu chien, contrib. Biol. Lab. Sci. Soc. China 3: 68. 1927; W. W. Smith in notes Bot. Gard. Edinb. 17: 318. 1930; Hand.-zaz. Syno. Sin 7: 706. 1933 non Nees.

Herewith I name the lectotype of the species and typical variety Wall. Cat. 3730, Sheopore, Nepal, June, 1821, Acc. no. 191766 (CAL).

Herb, 0.7 m tall. Tubers fasicled, fusiform, hard. Base of stem swollen with fleshy deciduous scales. Stem straight, soft, smooth, having whorl of leaves at the top. Leaves palmately compound, up to 25 cm long, 5 foliate, rarely 3 foliate, long petiolate, petiole slender, soft, glabrous 4-7 cm long; leaflets 5, sessile to petiolate, 5-15 cm long 1-5.5 cm wide, lanceolate, membranaceous, somewhat "rough with copious, gray, subulate, bristly hairs along the veins, margins indented with cuspidate double serratures", acuminate, acumination upto 2 cm, base angustate to obtuse, lateral veins 5-8 on each side of the midrib, slightly raised on both surfaces, tertiary veins inconspicuous; petioles 0-2.5 cm long, terete, glabrous. Inflorescence terminal umbel 6-21 cm long; pedicels slender, 2 cm long puberulous, simple or branched at the tip, jointed below the flower, bracteoles deciduous, 0.4 cm long, narrowly lanceolate to linear. Flowers bisexual, ± 1 cm long. Sepals glabrous or more or less puberulous, margin obscurely 5 dentate, ± 1 mm long. Corolla polypetalous, petals 5, triangular, cuneate, 1-5.2 mm long, glabrous, nerve 1, prominent. Stamens 5, alternate to petals, ± 2 mm long, filament 1 mm long, filiform, anther oblong, 1 mm long (in bud), bilobed, dorsifixed. Disk flattened or concave; ovary 2-3 celled, styles 2, united at the base, straight. Fruit drupe, globose or laterally compressed (Plate 1).

Specimens examined: CENTRAL HIMALAYA: Sheopore, Nepal, June 1821, Wall. Cat. no. 3730, Lectotype (CAL). EASTERN HIMALAYA: Rahu to Wakka, 2.7. 1961, Tirap Frontier Division, NEFA, *D. B. Deb* 26395 (CAL); Tonglo, Sikkim, *T. Thomson* 56 (CAL); Bhutan & Sikkim, *Griffith* s.n. Kew Distrib. no. 2658 (CAL); Tonglo, 2745 m, 4.9. 1874, *G. King* s.n. Acc. no. 191761 (CAL); Tonglo, 3050 m, 8.6.1884, *C. B. Clarke* 35745 (CAL); Sundukphoo, 3050 m, Sikkim, 4.6.1884, *C. B. Clarke*, 35685 (CAL); Neebi to Buckeem 2135-2440 m, Sikkim, 6.10.1862, *T. Thomson* 644 (CAL); Chungthang, 1525 m, 16.5.1945, *K. Biswas* 6686 (CAL), Konoma, Assam, May 1895, G. Watt 11545 (ISIM); Raho to Vokanoska, Tirap F. D., NEFA, 26.8.1958, undershrub on humid soil, flowers orange yellow, fruits green, *G. Panigrahi* 16833 (ASSAM); Chengum to Wakka, 2745 m, Tirap F. D., NEFA, 3.7.1961, *D. B. Deb* 26479 (ASSAM).

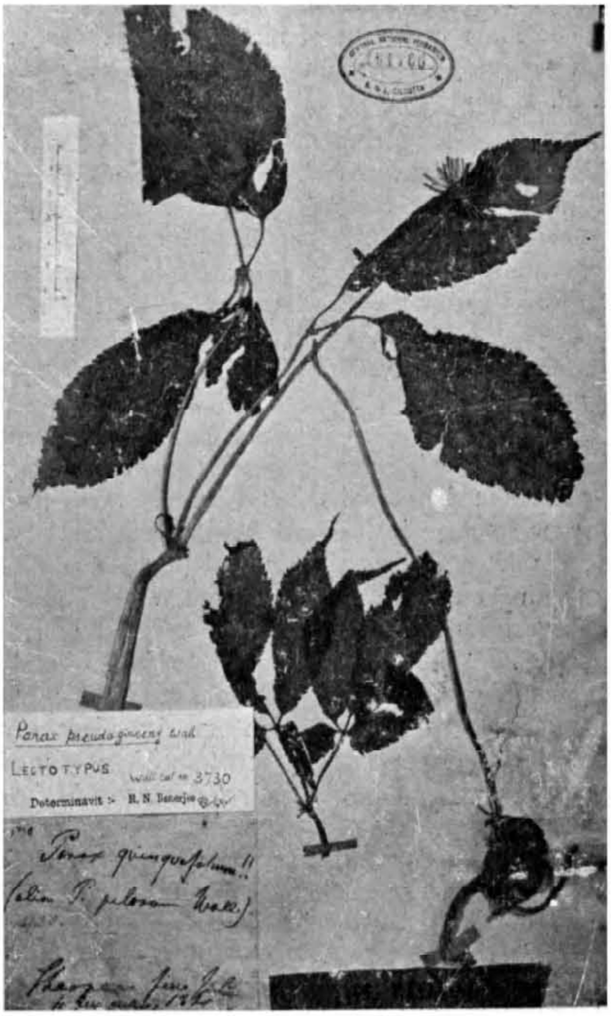

Plate 1: *Panax pseudoginseng* Wall.

Additional distribution: Indo-China and China.

Burkill (1902) described *Aralia quinquefolia* (L.) Decne. et Planch. var. *pseudoginseng* and *A. quinquefolia* var. *angustifolia* but differentiating characters becomes more or less same. The common characters are as follows "Flolia majora ... laceolata, conspicuissime acuminata, margin serrata, peduncles petioles cum laminis acquilonges, umbella plerumque singula". The character "petuli conspicui" carries no weight as this is distinct in the type of *Panax pseudoginseng* Wall. which is a legitimate species and *A. quinquefolia* (L.) Decne. et Planch. var. *pseudoginseng* Burkill is mere a synonyme of it, So I am in favour of merging *A. quinquefolia* var. *angustifolia* Burkill with *P. pseudoginseng* Wall.

Panax pseudoginseng Wall. var. **bipinnatifida** (Seem.) Li in Sargentia 2 : 118. 1942. Type : Sanding, East Indies (Herb. Hook). *P. bipinnatifidus* Seem. in Journ. Bot. 6: 54. 1868; Revis. Heder. 100. 1868; Harms in Pflanzenfam. 3(8): 60. 1894; Smith notes Bot. Gard. Edinb. 14 : 251. 1924; Hand.-Maz. Synb. Sin. 7: 706. 1933. *Arali bipinnatifida* Clarke in Fl. Brit. Ind. 2 : 722. 1879.

Perennial herb. Root stock horizontal. Stem straight, slender, terete, glabrous, bearing whorl of 3-5 leaves at the top, diameter 3-4 mm. Leaves green, 8-17 cm long, petiolate; petioles glabrous, terete 3.5-7.5 cm long, leaflets shortly petiolulate, 2.5-11 cm long, upper surface sparcely hispid, ventral surface glabrous, bipinnatifid, lanceolate acuminate, lobes serrated. Inflorescence terminal, solitary, bearing single umbel at the top, umbel 1.5-2 cm in diameter, many flowered, peduncles 7-18 cm long, glabrous, terete, pedicel puberulous, articulated, 0.3-1.4 cm, long. Flowers green bisexual, actinomorphic, bracteate, bracts caducous. Petals 5, triangular, 1-1.5 mm long. Calyx cupular, sepals obscurely toothed; teeth 5, caducous, valvate. Stamens 5, anthers bilobed, dorsifixed, ovary inferior, styles 2.3, erect. Fruits berries.

Specimens examined: EASTERN HIMALAYA: Laghep, 3050 m, Sikkim, 11.7.1910, *W. W. Smith* 3375 (CAL); Tonglo, 2440 m, Sikkim, 4.6.1884, *C. B. Clarke* 35691C (CAL); Mt. Singalah, 3660 m, Sikkim, 13.6.1892, *G. A. Gammie* 64 (CAL); Mt. Tankra, 3507 m, Sikkim, 18.8.1892, *G. A. Gammie* 664 (CAL); Sikkim Himalaya, 3050 m, *J. D. H.* s.n. (CAL). TIBET: Pinchungmy, 28.6.1878, Dungboo s.n. Acc. no. 191780 (CAL). Tawang, 3400 m, Kameng F. D., 30.5.1957, *R. S. Rao* (ASSAM).

Additional distribution: China.

Panax fruticosus Linn. Sp. Pl. ed. 2. 1513. 1763; DC. Prodr. 4: 254. 1830; Blume Bizid. Ned. Ind. 1: 880. 1825; Roxb. Hort. Beng. 21. 1814, Fl. Ind. 2 : 76. 1832, in E. I. C. mus. t. 1389; Wt. & Arn. 1 : 376. 1834; Wt. Icon. t. 573. 2 : 1852; Kurz For. Fl. 1 : 537. 1877; Miq. Fl. Ind. Bat. 1(1): 765. 1855. Type : (*P. fruticosus* Linn.) = *Nothopanax fruticosus* Miq. Fl. Ind. Bat. 1(1): 765. 1855.

An evergreen shrub. Stem straight, short branched, bark dark coloured with many, small, ash coloured scabrous dots. Leaves alternate, green, recurved, palmately compound, 6-15 cm long, glabrous, tripinnate; lower pair of pinulae opposite; leaflets lanceolate or oval to oblong, often variously lacinate, even very irregular in shape, serrated, 2-8.5 cm long, sometimes inciseded, very often nearly entire, petiolate, acuminate serrations ending in subulate, inoffensive points, smooth on both sides, petioles stemclasping, round, smooth, maculate, jointed, swollen at the joints. Inflorescence in terminal panicle, composed of numerous, small, subrotund, simple, umbels, involucre of bracts minute, deciduous, pedicels 1-3 mm long, jointed. Calyx cupshaped, sepals 5, persistent, ± 1 mm long. Petals 5, linearly ovate-oblong, first spreading then reflexed, shortly acute, midvein obscured, ± 3 mm long. Stamens 5, 2.5 mm long (in bud), alternate with but shorter than petals, anthers oblong, 1.5 mm long, filament 1.5 mm long, ovary inferior, style 1 connical, short, stigma 2 or 3 according to the lobes of the ovary, persistent, straight. Fruit berry, 2.3 mm in diameter, 2 or 3 lobed, small, blackish. Seed one in each lobe of the ovary.

Specimens examined: HIMALAYAN REGION: *Wallich* Cat. 4932 A, Acc. no. 192149 (CAL); SOUTH INDIA: Madras, *Wallich* Cat. 4932 B Acc. no. 193591 (CAL); Banvasi, Kanara, 18.11.1908 leaves a good medicine for snake bite. *L. B. Kulkarni* s.n. (BSI); Tenmalai, Travancore State, 11.9.1913, *C. C. Calder & M. S. Ramaswami* 823 (CAL); Tinnevelly hills, Tinnevelly District, 610 m, Feb. 1913, *D. Hooper & Ramaswami* 39395 (CAL).

Additional distribution: Burma.

This species is the native of Polynesia but it is feral in India.

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